UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,140	08/25/2003	Richard Harvey	063170.6611	3247

5073 7590 01/29/2008 BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980	**EXAMINER** LEWIS, ALICIA M

ART UNIT	PAPER NUMBER
2164	

NOTIFICATION DATE	DELIVERY MODE
01/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com
glenda.orrantia@bakerbotts.com

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>23 October 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-17</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/14/07</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This office action is responsive to the Request for Continued Examination (RCE) filed October 23, 2007. Claim 13 has been amended. Claims 1-17 are pending in this application.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claims 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3.   Claim 13 recites the limitation "having a plurality of object classes, the plurality of object classes having a plurality of attributes". It also states that each unique attribute name corresponds to a different object class. If each attribute corresponds to a different object class, then each object class can only have one attribute. This contradicts, the first limitation of "having a plurality of object classes, the plurality of object classes having a plurality of attributes". For the purposes of examination, the examiner will interpret the claim as each unique name corresponding to only one object class. Claims 14-17 are rejected as being dependent upon rejected claim 13.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Srinivasan et al. (US Patent 6,834,286 B2) ('Srinivasan') in view of Gadbois et al. (US

Patent Application Publication 2004/0002955 A1) ('Gadbois').

With respect to claims 1 and 7, Srinivasan teaches:

providing a directory (Figure 1, abstract, column 4 lines 34-37) having object

classes and attributes (Figure 1, column 1 lines 54 – column 2 line 13);

defining attributes of a specific type which correspond to a specific object class

(Figures 1 and 4, column 2 lines 1-50, column 5 lines 37-65); and

generating an index based on the specific attribute types (Figures 2A-2C, 4 and

6A-E, column 3 lines 17-37, column 5 lines 37-40, column 9 lines 5-13).

Srinivasan does not explicitly teach that the directory is used for providing web

services.

Gadbois teaches information model mapping with shared directory tree

representation (see abstract), in which he teaches a web services directory (paragraph

5 lines 14-25 and paragraph 24).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Srinivasan by the teaching of Gadbois because a web services directory would enable a registry service to help support the storage and retrieval of data and enable authentication, which would provide secure access to Internet services and applications (Gadbois, paragraphs 24 and 25). The modification would also enable an improved method and system for storing and maintaining object-oriented data in an RDBMS, more particularly for storing and maintaining directory information objects, such as LDAP data, in an RDBMS (Srinivasan, column 4 lines 25-31).

With respect to claims 2 and 8, Srinivasan as modified teaches wherein the object classes are a subclass of an abstract object class (Srinivasan, column 14 lines 18-36).

With respect to claims 3 and 9, Srinivasan as modified teaches wherein the specific object class relates to at least one of keyed references, names and classes (Srinivasan, Figure 1; Gadbois, paragraph 38, paragraph 64).

With respect to claims 4 and 10, Srinivasan as modified teaches wherein the object class is an auxiliary object class (Srinivasan, column 15 lines 15-21).

With respect to claims 5 and 11, Srinivasan as modified teaches wherein the auxiliary object class is a Publisher Assertion Keyed Reference (Gadbois, paragraphs 38-39, paragraph 47, paragraph 64).

With respect to claims 6 and 12, Srinivasan as modified teaches further comprising providing specific attributes which relate to one object class for a purpose of enhancing searching (Srinivasan, column 9 lines 1-11).

6.   Claims 13, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alfred (US 6,236,988 B1) in view of Gadbois et al. (US Patent Application Publication 2004/0002955 A1) ('Gadbois').

With respect to claim 13, Alfred teaches:

providing a directory having a plurality of object classes, the plurality of object classes having a plurality of attributes (Figures 1 and 2);

defining a plurality of unique names for each of the plurality of attributes, each of the plurality of unique names corresponding to a different one of the plurality of object classes (Figures 1 and 2); and

generating an index based on the plurality of unique names (column 2 line 59 – column 3 line 8).

Alfred teaches that the index table has a name and associated identifier for each

object and the corresponding data table has a column for each unique attribute name.

Therefore, an index is based on the unique attribute names.

Alfred does not teach the directory being a web services directory.

Srinivasan does not explicitly teach that the directory is used for providing web services.

Gadbois teaches information model mapping with shared directory tree

representation (see abstract), in which he teaches a web services directory (paragraph

5 lines 14-25 and paragraph 24).

It would have been obvious to a person having ordinary skill in the art at the time

the invention was made to have modified Alfred by the teaching of Gadbois because a

web services directory would enable a registry service to help support the storage and

retrieval of data and enable authentication, which would provide secure access to

Internet services and applications (Gadbois, paragraphs 24 and 25).

With respect to claim 15, Alfred as modified teaches wherein the specific object

class relates to at least one of keyed references, names and classes (Gadbois,

paragraph 38, paragraph 64).

With respect to claim 17, Alfred as modified teaches wherein the auxiliary object

class is a Publisher Assertion Keyed Reference (Gadbois, paragraphs 38-39, paragraph

47, paragraph 64).

7.   Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Alfred (US 6,236,988 B1) in view of Gadbois et al. (US Patent Application

Publication 2004/0002955 A1) ('Gadbois') as applied to claims 13, 15 and 17 above,

and further in view of Srinivasan et al. (US Patent 6,834,286 B2) ('Srinivasan').

With respect to claim 14, Alfred as modified teaches claim 13.

Alfred as modified does not teach wherein the object classes are a subclass of

an abstract object class.

Srinivasan teaches a method and system for representing and accessing object-

oriented data in a relational database system (see abstract), in which he teaches

wherein the object classes are a subclass of an abstract object class (column 14 lines

18-36).

It would have been obvious to a person having ordinary skill in the art at the time

the invention was made to have further modified Alfred by the teaching of Srinivasan

because wherein the object classes are a subclass of an abstract object class would

enable an improved method and system for storing and maintaining object-oriented data

in an RDBMS, more particularly for storing and maintaining directory information

objects, such as LDAP data, in an RDBMS (Srinivasan, column 4 lines 25-31).

With respect to claim 16, Alfred as modified teaches wherein the object class is

an auxiliary object class (Srinivasan, column 15 lines 15-21).

Response to Arguments

8.   Applicant's arguments filed October 23, 2007 have been fully considered but they are not persuasive. Applicant argues that neither Srinivasan not Gadbois alone or in combination, teach defining attributes of a specific type which correspond to a specific object class because Srinivasan teaches that both the "Department" object class and the "Person" object class include the same attribute type "State". Examiner disagrees. Claims 1 and 7 require attributes types that correspond to specific object classes. The claims DO NOT specify that attribute types must correspond to ONLY one object class. Instead, it only requires that attributes of a specific type correspond to at least one object class. The attribute types "Department Name" and "Telephone Number" both correspond to specific object classes, i.e. "Department" and "Person", respectively. Therefore, Srinivasan teaches defining attributes of a specific type, which correspond to a specific object class.

9.   Applicant further argues that Srinivasan does not teach generating an index based on the specific attribute types. Examiner disagrees. Srinivasan teaches that indexes may be generated for each object class, and that a separate column exists for each attribute type (Figures 2A-2C, column 3 lines 17-37). He further teaches that all entries may be indexed in attribute_store table 400 (column 5 lines 37-40). This index includes an AttrName column, which represents the attribute types (Figure 4). Lastly, Srinivasan teaches that specific attribute types may be indexed separately (column 9 lines 5-11), as can be seen in Figures 6A-E. Therefore, it is clear that Srinivasan teaches generating an index based on specific attribute types. Each of the indexes

described above include some relation to the attribute type, and thus can be considered based on attribute types.

10.   Applicant's arguments with respect to claims 13-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Lewis whose telephone number is 571-272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alicia Lewis
January 18, 2008

SAM RIMELL
PRIMARY EXAMINER